

La WHAT IS CLAIMED IS:

1. A high registration photographic exposure system comprising:

*P<sub>1</sub>* a command device for generating an input command signal;

*P<sub>2</sub>* an integrated circuit read only memory for storing  
5 command information;

*P<sub>3</sub>* an integrated circuit alterable memory for storing  
processed information;

*P<sub>4</sub>* a processor for processing the information stored in  
10 said alterable memory in response to the input command signal  
from said command device under control of the command information  
stored in said read only memory;

*P<sub>5</sub>* a control circuit for generating a control signal in  
response to the processing of information with said processor;  
and  
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*P<sub>6</sub>* a high registration machine for generating a plurality of  
contact exposures having high registration therebetween in  
response to the control signal.

2. The system as set forth in claim 1 above, wherein  
said read only memory is a computer main memory, wherein the  
stored command information includes a computer program, and  
wherein said processor is a computer processor.

3. An illumination control system comprising:

a monolithic processor for processing information, said processor including;

(a) an integrated circuit read only memory for storing  
5 command information,

(b) an integrated circuit alterable memory for storing  
processed information, and

(c) integrated circuit processing logic for processing  
the information stored in said alterable memory  
10 under control of the command information stored in  
said read only memory;

a control circuit for generating a control signal in  
response to the processing of information with said processing  
logic; and

15 a machine for exposing an illumination sensitive medium  
in response to the control signal.

4. The system as set forth in claim 3 above, wherein  
said machine is a high registration machine for exposing a  
high registration photomask medium in response to the control  
signal.

5. The system as set forth in claim 3 above, wherein  
said machine is a photographic camera for exposing a photographic  
film medium in response to the control signal.

6. The system as set forth in claim 3 above, wherein  
said monolithic processor is a stored program digital computer  
and wherein the command information stored in said read only  
memory is a stored program.

7. The system as set forth in claim 3 above, further comprising an operator input device for generating an input signal in response to operator actuation, wherein said processing logic includes operator command logic for processing the  
5 information stored in said alterable memory in response to the input signal under control of the command information stored in said read only memory.

8. The system as set forth in claim 3 above, wherein said machine includes a shutter for exposing an illumination sensitive medium in response to the control signal.

9. The system as set forth in claim 3 above, further comprising an operator display for displaying information to an operator in response to a display signal, wherein said monolithic processor includes display logic for generating the  
5 display signal in response to the processing of information with said processing logic under control of the command information stored in said read only memory.

10. The system as set forth in claim 3 above, wherein said machine includes means for loading an illumination sensitive medium.

*Gilbert P. Hyatt 10/10/78*